Comparisons of Job Characteristics

Focus Occupation: **Computer and Information Systems Managers (11-3021)**
Associated Occupation: **Computer Programmers (15-1021)**

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge — Similarity of Focus Occupation to Associated Occupation: 82

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer Programmers (15-1021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Computers and Electronics	8.4	24.2	20.0	<<	Extensive education and/or training may be required
Mathematics	9.2	13.1	10.4	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills — Similarity of Focus Occupation to Associated Occupation: 40

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer Programmers (15-1021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Programming	2.2	17.3	6.9	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	11.6	7.2	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	10.1	9.6	0	Current skill level may be sufficient
Systems Evaluation	6.4	10.1	12.2	>	Skill level is likely sufficient
Technology Design	2.6	6.2	5.9	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities — Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer Programmers (15-1021)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Written Comprehension	11.0	13.8	15.1	0	Current ability level may be sufficient
Information Ordering	9.9	12.8	12.3	0	Current ability level may be sufficient
Deductive Reasoning	10.6	12.2	13.2	0	Current ability level may be sufficient
Inductive Reasoning	10.2	11.6	13.2	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	10.2	7.7	<<	Extensive improvement in abilities may be required
Number Facility	6.3	9.6	7.5	<	Some improvement in abilities may be required
Perceptual Speed	7.4	8.7	7.2	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 90

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer Programmers (15-1021)

Work Activities	Exclusivity of Activity
Analyze workflow	89
Consult with customers concerning needs	69
Consult with managerial or supervisory personnel	60
Develop computer performance standards	87
Direct and coordinate activities of workers or staff	3
Evaluate computer system user requests or requirements	81
Follow data security procedures	77
Follow data storage procedures	75
Recommend software or hardware purchases	85
Revise or correct errors in computer programs, software, or systems	85
Test computer programs or systems	78
Use computer application flow charts	84
Use computer programming language	82
Use project management techniques	47

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 83

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer Programmers (15-1021)

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Industry specific software	1
Network applications software	1
Operating environment software	12
System Cards	51

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.